



# Sustainability Commission

## Attachment: Sustainability Education Subcommittee DRAFT Education Curriculum

[Update: 04/18/23]

### Structure & Plan:

- The intention is to provide a series of seminars/information sessions for the Groton public spanning 7 major areas, each with one or more sessions.
- To be delivered via both live participation in a public space (Groton Center, RiverCourt Room) and recorded for on-line viewing by Groton Channel TV, possibly with live broadcast as well.
- Delivered with the assistance of local educators and experts who may already have pre-prepared materials at their disposal for the purpose, with <hopefully> minimal editing or additions required.
- Several of these session topics will be accompanied by an article placed in the *Groton Herald* and other social media outlets to broaden the availability of information.
- The first session will be in Spring 2023, with others to follow on a *roughly monthly* schedule.

### Draft Curriculum Areas & Sessions – order & topics still subject to change

#### “THE BIG PICTURE”

- First Session of the Series **[CONFIRMED DATE: May 4<sup>th</sup>, 7:00pm]**  
*Panel discussion led by Keith Bergman of the [Climate Reality Project](#)*  
*Other panelists: Sue Thomas – Westford/Carlisle Sustainability Coordinator, Melanie McCracken – GDRHS Environmental Science, Michelle Ruby – Lawrence Academy Environmental Science Catherine Daley – GDRHS Env. Club President, Svea Sullivan – GDRHS Env. Club Vice Pres.*
  - What is happening with Climate Change globally, nationally and in the state
  - United Nations COP27 conference results, projections & commitments
  - Major trends & topic areas
  - Groton's place in the bigger picture of climate change – expected impacts of climate change here, our contributions to climate change vs. the average American citizen & average global citizen
  - Introduction to the remainder of the planned curriculum & solicitation for other topics

## “RESIDENTIAL & BUSINESS LOCATIONS”

- Session 2: “In Home” **[CONFIRMED DATE: May 25<sup>th</sup>, 7:00pm]**  
*Principal Speakers: Miranda D'Oleo, Mass. Climate Action Network [MCAN] – Buildings Campaign Director, and Zoe Eckert, Massachusetts Municipal Wholesale Electric Company [MMWEC] - Sustainable Energy Policy & Program Senior Mgr.*
  - LED Lighting
  - Energy Star Appliances
  - Insulation
  - Smart Thermostats
  - Free Energy Efficiency Audits [GELD and MassSaves]
  
- Session 3: “Heating & Cooling” **[CONFIRMED DATE: June 15<sup>th</sup>, 7:00pm]**  
*Principal Speakers – Bob Zogg, (HeatSmart), John Moore (New England Solar Hot Water), and Phil Francisco*
  - Solar-Hybrid Hot Water
  - Heat Pump-Hybrid Hot Water
  - Heat Pumps
  - Biomass (residential)
  - Geothermal
  - Retrofitting
  
- Session 4: “Energy” **[TARGET DATE: EARLY SEPTEMBER]**
  - Net Zero Buildings - Iodestar/objective: moving toward “NetZero”
  - Rooftop Solar
  - Battery Usage to “delay sunlight”
  - EV-to-Home Battery Charging
  - Micro Wind
  - Community Solar / Microgrids

- Session 5: **“Land Use”** [CONFIRMED DATE: June 29<sup>th</sup>, 7:00pm]  
*Principal Speakers: Carolyn Francisco to lead a “case study” presentation, with participation from Kim Kuliesis (Operations Mgr., Laurel Gardens, Groton Stewardship Committee) and Trevor Smith (Weston Nurseries)*
  - Lawn Alternatives / Native Plants & Grasses - a GROTON CASE STUDY
  - Lawn Fertilization [incl. in Case Study]
  - Nutrient Management [incl. in Case Study]
  - Composting [incl. in Case Study]
  - Leaf Litter Uses [incl. in Case Study]
  - Regenerative Agriculture and Conservation Agriculture [incl. in Case Study]
  - Neighborhood Farm Share
  - Forest Protection
  - Solar-powered Greenhouses
  
- Session 5A: **“Waste Stream”** [TARGET DATE: MID-to-LATE SEPTEMBER]
  - Household Recycling
  - Produce Gleaning
  - Composting
  - Waste Stream Awareness
  - Food Waste

## **“TRANSPORTATION”**

- Session 6: **“Personal Transportation”** [TARGET DATE: TBD]
  - Cars – our dependency on them & alternatives for powering autos?
  - Electric Vehicles
  - Electric Bikes
  - Ridesharing
  - Telepresence / Technology
  
- Possible Session 6A: **“Municipal Transportation”** [TARGET DATE: TBD]
  - Town Municipal Fleet: Cars, Pickups, Trucks and School Busses
  - Walkable Cities / Towns
  - Bike Infrastructure / Bike Friendly
  - Mass Transit & Connections

## **“FOOD”**

- Session 7: **“Food Choices”** [TARGET DATE: TBD]
  - Plant-rich Diet
  - “Local-vore” Diet - the bounty of our local farms and gardens
  - Seasonality-sensitive Diet (e.g., “100-mile diet”)

## **“ENERGY”**

- Session 8: **“Commercial / Utility Energy”** [TARGET DATE: EARLY OCTOBER]
  - Groton’s Municipal Power Sources (now & planning into the future)
  - Grid Flexibility
  - Commercial Solar
  - Wind Turbines (onshore & offshore)
  - Nuclear
  - Waste to Energy

## **“WATER”**

- Session 9: **“Water Usage”** [TARGET DATE: TBD]
  - Rain Cycle and Expanding/Worsening Regional Droughts
  - Conservation
  - Irrigation
  - Agriculture
- Session 10: **“Municipal Water Supply”** [TARGET DATE: TBD]
  - Understanding/Sustaining Groton’s Source Aquifers
  - Water Distribution, Efficiency, Leakage, Quality Testing
- Session 11: **“Water/Snow Runoff & Waste”** [TARGET DATE: TBD]
  - Waste Stream Awareness
  - Agricultural Runoff into Wetlands
  - Storm Water & Runoff
  - Rainwater Capture
  - Snow / Ice Removal
  - Mosquito / Pest Control

## **“ENVIRONMENT”**

- Session 12: **“Miscellaneous Topics”** [TARGET DATE: TBD]
  - Dealing with Invasive Species
  - Forest & Land Protection
  - Pollution Reduction and Control (water table, leaks, toxic chemicals, PFAS)